

CLAIMS

We claim:

1. A suspension assembly, comprising:
a) a trailing arm;
b) a hanger bracket for attaching a leading end of said trailing arm to a vehicle frame member and defining a pivot axis for said trailing arm;
c) a spring acting between a spring seat attached to said trailing arm and said frame member;
d) an axle attached to said trailing arm; and,
e) a supplemental axle locating member for supplementally locating said axle with respect to said frame.

2. The apparatus of claim 1, wherein said supplemental locating member includes a finger-like extension engageable with a receiving member mounted to said frame.

3 The apparatus of claim 2, wherein said receiving bracket includes abutment surfaces slidably engageable with said extension.

4. The apparatus of claim 3, wherein said supplemental axle locating member is secured to said axle.

5. A suspension assembly, comprising:
a) a pair of spaced apart trailing arms;
b) a hanger bracket associated with each trailing arm and operative to mount a leading end of said trailing arm to an associated frame member;
c) each bracket comprising a pair of plates having upper ends attached to said frame and having lower portions spaced apart from each other to define a gap

defining a mounting location for said leading end of said
trailing arm;

d) said plates being compliant in order to allow
controlled bending movement in the bracket; and,

e) a moment canceling member interconnecting
said spaced apart hanger brackets for substantially
canceling outward bending moments of said brackets.

6. The suspension of claim 5, wherein said inner
plate is substantially planar and extends downwardly from
said frame in a plane substantially parallel with said frame
member, and said outer plate is bent outwardly and then
downwardly to define a planar section parallel to the plane
of said inner plate.

7. The apparatus of claim 6, wherein said inner plate
and said planar section of said outer plate define aligned
mounting holes for an associated trailing arm, said holes
allowing longitudinal adjustment of said trailing arm to
precisely locate an axle attached to said trailing arm, with
respect to said frame members.

8. The suspension of claim 7, further including an
adjustment mechanism associated with each hanger bracket for
facilitating adjustment of the position of the trailing arm
with respect to its associated hanger bracket.

9. The suspension of claim 8, further including
spacers for locating said torque arm within said gap and
sized to provide clamping forces to said inner and outer
plates, whereby relative movement between said trailing arm
relative to said hanger bracket is substantially resisted.

10. The suspension of claim 5, wherein said moment
canceling member comprises at least one wire element

extending between the inner plates of respective hanger brackets.

11. The suspension of claim 2, wherein said receiving member and said finger-like extension are adapted to concurrently receive a locking tool such that relative movement between said axle and said frame member is substantially resisted.

12. The suspension of claim 11, further including a shock bracket extending rearwardly from an end of said trailing arm and adapted to pivotally connect to one end of a shock.

13. The suspension of claim 12, wherein said shock bracket further includes abutments that extend beyond a periphery of said shock and are adapted to receive impact forces whereby potential damage to said shock is reduced.

14. The apparatus of claim 1, wherein said spring is located with respect to said frame member, such that a centerline of said spring is substantially aligned with a frame sheer center of said frame member.

15. A suspension assembly, comprising:

a) a pneumatic spring for resiliently coupling an axle to a frame member;

b) a valve for controlling pressurization of said pneumatic spring, said valve including a control lever;

c) an operating rod for said control valve having one end pivotally connected to said control lever and another end coupled to said axle, such that movement in said axle produces movement in said operating rods; and,

d) said operating rod configured and positioned such that an axis of said rod extends through or in close

proximity to a roll center of said vehicle.

16. The suspension assembly of claim 15, further including a shock for damping movements in said axle and including a mounting member to which said other end of said operating rod is connected.